September 22, 2011

Via Electronic Filing
Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: Written *Ex Parte* Presentation, GN Docket No. 09-51; WC Docket Nos. 96-45, 05-337, 10-90; WT Docket No. 10-208; CC Docket No. 01-92.

Dear Mr. Chairman and Commissioners:

CTIA – The Wireless Association® ("CTIA") supports your efforts to comprehensively reform the high cost universal service support mechanisms so these programs will focus on consumers and the services they demand, namely mobility and broadband. CTIA has consistently emphasized that, in order to achieve successful and forward-looking universal service reform, it is critical for the Commission to develop a robust, ongoing mobility fund that will help facilitate the wireless broadband goals of the President and the Commission. To assist the Commission in developing a fund targeted at supporting mobile wireless services in high cost areas, CTIA has commissioned CostQuest Associates ("CostQuest") to undertake the attached update to its *2008 Ubiquitous Mobility Study* and to quantify the initial investment that will be required to achieve ubiquitous access to mobile broadband services. The findings of this study, demonstrating that this goal will require between 7.8 to 21 billion dollars in initial investment alone, bolster CTIA's contention that a robust and ongoing mobility fund is necessary to drive mobile broadband throughout the country to the places that consumers live, work, and travel.

CTIA commissioned CostQuest, a business and economic consulting firm, to analyze commercially available data about mobile wireless broadband coverage. CostQuest found that "[d]eployment of mobile broadband services is happening in the U.S. at a rapid pace, but these technologies are not yet available to all U.S. consumers in all areas of the country, especially those who reside, work, and travel in less dense, rural areas." The study analyzes the cost of expanding service to serve residential population distribution as well as most roads and highways. As CostQuest observes, "[b]ecause mobility is a fundamental characteristic of wireless coverage, we felt it was important to both identify where population resides as well as how that population could move (*e.g.*, roads)."

CTIA asked CostQuest to focus on the cost of completing the build-out of a broadband-capable mobile network because the record is overwhelmingly clear that consumers currently demand mobility and broadband. CostQuest's study estimates only up-front construction costs (*i.e.*, only the cost of "upgrading" the wireless network to

extend coverage to unserved and underserved areas), and does not attempt to estimate the ongoing costs for the "provision" or "maintenance" of service in these or other areas, or the cost of currently providing service to high cost areas. It also does not attempt to estimate the cost of the spectrum needed to provide wireless service – which would need to be included in any universal service cost estimate. CTIA continues to believe that a Mobility Fund should cover both initial deployment costs and ongoing costs of operating and maintaining mobile wireless service in high cost areas. Thus, the Commission must account for these factors in developing a budget for the proposed Mobility Fund.

The first step in CostQuest's analysis was to compile information on the extent of current mobile wireless broadband coverage in the United States. Using coverage data from American Roamer (the same source upon which the Commission relied for the most recent CMRS Competition Report), CostQuest focused on the predominant types of mobile broadband technologies that are being deployed today. First, the study considers mobile broadband services powered by Evolution Data Optimized ("EvDO") and High-Speed Packet Access ("HSPA") technologies. Second, the study analyzes next generation Orthogonal Frequency-Division Multiplexing ("OFDM") mobile broadband services, powered by Long Term Evolution ("LTE") and WiMAX networks. CTIA identified these technologies for investigation because they reflect the primary areas of investment by mobile broadband providers as they seek to expand the capacity and coverage of their networks. Collectively, these mobile broadband services provide consumers increasingly robust broadband connectivity to voice, data, and video services.

The study analyzes deployment of the two types of technologies described above, and works toward three conclusions:

- What it would cost to deploy both HSPA and EvDO to all of the citizens and roads in the United States (an update of the CTIA/Cost Quest 2008 study);
- What it would cost to deploy <u>both</u> OFDM technologies (LTE and WiMAX) to all of the citizens and roads in the United States;
- What it would cost to deploy <u>either</u> OFDM technology (LTE or WiMAX) to all of the citizens and roads in the United States;

Regarding the first analysis – cost to deploy both HSPA and EvDO – CostQuest found that approximately 54 million U.S. residents currently do not have full access to mobile broadband service via both EVDO and HSPA technologies at their primary place of residence, and that approximately 62% of road miles in the United States do not have full access to both EVDO and HSPA mobile broadband services. The estimated minimum investment needed to build out infrastructure to facilitate full access to these EVDO and HSPA mobile broadband services ubiquitously is approximately $7.8 billion.

Regarding the second analysis – cost to deploy <u>both</u> OFDM technologies (LTE and WiMAX) – CostQuest determined that about approximately 225 million U.S. residents currently do not have access to both forms of next generation OFDM mobile broadband service (LTE and WiMAX) at their primary place of residence. The study

also finds that approximately 95% of road miles in the United States do not have access to both forms of next generation OFDM mobile broadband services. CostQuest finds that the estimated minimum investment needed to build out infrastructure to facilitate both the OFDM technologies ubiquitously is approximately $21 billion.

Regarding the third analysis – cost to deploy either OFDM technology (LTE or WiMAX) – CostQuest determined that about approximately 165 Million U.S. residents currently do not have access to either form of next generation OFDM mobile broadband service (LTE or WiMAX) at their primary place of residence. The study also finds that approximately 90% of road miles in the United States do not have access to either form of next generation OFDM mobile broadband services. Cost Quest finds that the estimated minimum investment needed to build out infrastructure to facilitate only one next generation OFDM technology is approximately $10 billion.

While commercial providers are making enormous investments toward the build-out and enhancement of their networks, and will continue to do so, this study's analysis of evolving mobile broadband technologies demonstrates that there is a not insignificant percentage of the country (as shown in the coverage analysis of roads) that remain unserved by mobile broadband technologies. CostQuest's study is not intended to be a precise estimate of the final costs of this build-out effort, but rather it is intended as a broad estimate to frame the scope of the issue. Within that framework, however, CostQuest conservatively estimates that completing this considerable wireless broadband build-out project will cost between approximately 7.8 to 21 billion dollars in initial investment alone, depending on the coverage goal. Universal service support can play a critical role in meeting those needs.

This estimate has significant implications for the universal service policy debate. First, it suggests that proposals to cap the Mobility Fund at $300 million would be significantly inadequate for deploying ubiquitous mobile broadband. The Commission must approach this challenge consistent with its obligation to ensure "sufficient" universal service support. In its recent comments to the Commission, CTIA applauded the recognition in several recent reform proposals of the need for on-going support for mobile services; however, CTIA noted that the funding levels proposed appear insufficient to meet the needs of mobile broadband consumers in high-cost areas. CTIA explained that, in determining the appropriate size of a proposed Mobility Fund, the Commission must engage in a fact-based analysis and take account of the fundamental nature of mobile networks, which must be available wherever Americans live, work, and travel.

There can be no question that consumers, businesses, public safety, educators, health professionals, and all manner of other users are rapidly migrating to mobile broadband. While this estimate of the initial build-out cost of broadband-capable wireless networks will help frame the debate regarding wireless costs at this stage of the proceeding, CTIA looks forward to working with interested parties and the Commission to ensure that there is in place a sufficient mobility fund that ensures that Americans across the country have access to those services consistent with the goals of Congress, the National Broadband Plan, and the Commission.

Pursuant to Section 1.1206 of the Commission's rules, a copy of this letter is being filed via ECFS with your office. Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ *Christopher Guttman-McCabe*

Christopher Guttman-McCabe
Vice President, Regulatory Affairs

/s/ Scott K. Bergmann

Scott K. Bergmann
Assistant Vice President, Regulatory Affairs

Attachment

cc: Zachary Katz
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